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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/774,374	KAI ET AL.	
	Examiner	Art Unit	
	Nelson D. Hernández Hernández	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Glew, US Patent 6,297,843 B1.

4. **Regarding claim 1**, **Glew** discloses an integrated circuit (*See fig. 2*) comprising:

a bus (*See bus connected to CPU 31, Memory 35, Graphics circuit 34, Network circuit 33 and Video Processor 23 as shown in fig. 2*) (*Col. 3, lines 18-32*);

a first memory (*Fig. 2: 35*) connected to said bus (*Col. 3, lines 18-32*);

a first processing unit (*CPU 31 as shown in fig. 2*) operable to access said first memory via said bus (*Col. 3, lines 18-32*);

a second processing unit (*Video Processor 23 as shown in fig. 2*) operable to access said first memory via said bus (*Note that the Video Processor is connected to Memory 35 via said bus as shown in fig. 2*), and operable to perform at least one of data

processing and calculation in a larger amount than said first processing unit (*Video Processor is operable to process the video data which requires more processing capacity than the data managed by CPU 31. See col. 3, lines 33-65*); and

a second memory (*RAM 24 as shown in fig. 2*) operable to be accessed by said second processing unit without passing through said bus (*Note that the RAM 24 is directly connected to the Video Processor 24 as shown in fig. 2*) (*Col. 3, lines 6-65*).

5. **Regarding claim 2**, claim2 is written as a Markush type claim by using the expression "second processing unit comprises at least one of an image input circuit and an image display circuit", meeting one species of a genus family anticipates the claimed subject matter. "A generic claim cannot be allowed to an applicant if the prior art discloses a species falling within the claimed genus." The species in that case will anticipate the genus. In re Slayter, 276 F.2d 408, 411, 125 USPQ 345, 347 (CCPA 1960); In re Gosteli, 872 F.2d 1008, 10 USPQ2d 1614 (Fed. Cir. 1989).

Glew discloses that second processing unit comprises an image input circuit (*An image input circuit is inherent in the Video Processor 24 as said Video Processor 24 receives the video image captured by the camera 21 to produce a compressed/encoded bitstream. See Col. 3, lines 34-55*).

6. **Regarding claim 6**, **Glew** discloses that the second processing unit generates computer graphics image data (*By teaching that the invention is related to computer-based video and that the second processing unit process the video signal (Col. 1, lines*

5-10; col. 2, lines 43-57), Glew discloses that the second processing unit generates computer graphics image data since the invention is also related to a video conferencing device (Col. 3, lines 33-54)).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 3, 4 and 7-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glew, US Patent 6,297,843 B1 in view of Kawakami et al., 2002/0012522 A1.

9. **Regarding claim 3**, Glew discloses that said second processing unit compress the video signals but does not explicitly disclose that the first processing unit expands compressed audio signals, wherein said second processing unit expands compressed video signals, and wherein said second processing unit stores reference image data into said second memory, the reference image data being generated when the compressed video signals are expanded.

However, **Kawakami et al.** teaches a camera circuit (*See fig. 4*) comprising a first memory (*Fig. 4: 32*); a sound compression Encoder/Decoder (*Fig. 4: 37, the Examiner is interpreting the sound compression Encoder/Decoder as a first processing unit*) operable to access said first memory (*Page 8, ¶ 0150*), said compression

Encoder/Decoder, operable to compress and decompress the sound from the video (*Page 8, ¶ 0150, 0158, 0165*); an MPEG2 video signal Processing (*Fig. 4: 33, the Examiner is interpreting the MPEG2 video signal Processing as a second processing unit*) operable to access said first memory (*Page 8, ¶ 0156*), said MPEG2 video signal Processing operable to compress and decompress the video signal (*Page 7, ¶ 0144-0148; page 8, ¶ 0156-0157*), and operable to perform at least one of data processing and calculation in a larger amount than said first processing unit (*It is noted that the video processing in the MPEG2 video signal Processing requires calculation in a larger amount than the sound compression Encoder/Decoder*), wherein the MPEG2 video signal Processing expands compressed video signals, and wherein said second processing unit stores reference image data into said second memory (It is noted that the second memory is a dedicated memory for the compression/expansion processing and the video signal is temporally stored in the second memory (*Page 7, ¶ 0144*), the reference image data being generated when the compressed video signals are expanded (*It is also noted that the MPEG2 compression/decompression uses P-frames (Predictive frames) when performing compression/decompression that would later be used for either compressing or expanding the video signals, depending on the application (either reading or writing video data). Therefore, Kawakami et al. further teaches that the second processing unit expands compressed video signals, and wherein said second processing unit stores reference image data into said second memory, the reference image data being generated when the compressed video signals*

are expanded as claimed); and a second memory (*Fig. 4: 34*) operable to be directly accessed by said second processing (*Page 8, ¶ 0156*).

Therefore, taking the combined teaching of Glew in view of Kawakami et al. as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply the concept of using a dedicated processing unit for video compression and decompression having a dedicated memory for processing the video signals and a processing unit of compression and decompression of audio signals as taught in Kawakami et al. to modify the teaching of Glew to have the first processing unit expands compressed audio signals, wherein said second processing unit expands compressed video signals, and wherein said second processing unit stores reference image data into said second memory, the reference image data being generated when the compressed video signals are expanded. The motivation to do so would have been to further improve the processing units in Glew by allowing recording and play back moving picture data and edit recorded moving picture data.

10. **Regarding claim 4**, Glew discloses that said second processing unit compress the video signals but does not explicitly disclose that the first processing unit compress audio signals, and wherein said second processing unit stores reference image data into said second memory, the reference image data being generated when the compressed video signals are expanded.

However, **Kawakami et al.** teaches a camera circuit (*See fig. 4*) comprising a first memory (*Fig. 4: 32*); a sound compression Encoder/Decoder (*Fig. 4: 37, the*

Examiner is interpreting the sound compression Encoder/Decoder as a first processing unit) operable to access said first memory (*Page 8, ¶ 0150*), said compression Encoder/Decoder, operable to compress and decompress the sound from the video (*Page 8, ¶ 0150, 0158, 0165*); an MPEG2 video signal Processing (*Fig. 4: 33, the Examiner is interpreting the MPEG2 video signal Processing as a second processing unit*) operable to access said first memory (*Page 8, ¶ 0156*), said MPEG2 video signal Processing operable to compress and decompress the video signal (*Page 7, ¶ 0144-0148; page 8, ¶ 0156-0157*), and operable to perform at least one of data processing and calculation in a larger amount than said first processing unit (*It is noted that the video processing in the MPEG2 video signal Processing requires calculation in a larger amount than the sound compression Encoder/Decoder*), wherein the MPEG2 video signal Processing expands compressed video signals, and wherein said second processing unit stores reference image data into said second memory (It is noted that the second memory is a dedicated memory for the compression/expansion processing and the video signal is temporally stored in the second memory (*Page 7, ¶ 0144*), the reference image data being generated when the compressed video signals are expanded (*It is also noted that the MPEG2 compression/decompression uses P-frames (Predictive frames) when performing compression/decompression that would later be used for either compressing or expanding the video signals, depending on the application (either reading or writing video data). Therefore, Kawakami et al. further teaches that the second processing unit expands compressed video signals, and wherein said second processing unit stores reference image data into said second*

memory, the reference image data being generated when the compressed video signals are expanded as claimed); and a second memory (*Fig. 4: 34*) operable to be directly accessed by said second processing (*Page 8, ¶ 0156*).

Therefore, taking the combined teaching of Glew in view of Kawakami et al. as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply the concept of using a dedicated processing unit for video compression and decompression having a dedicated memory for processing the video signals and a processing unit of compression and decompression of audio signals as taught in Kawakami et al. to modify the teaching of Glew to have the first processing unit compresses audio signals, wherein said second processing unit stores reference image data into said second memory, the reference image data being generated when the compressed video signals are expanded. The motivation to do so would have been to further improve the processing units in Glew by allowing recording and play back moving picture data and edit recorded moving picture data.

11. **Regarding claim 7**, combined teaching of Glew in view of Kawakami et al. teaches a control unit operable to control at least one of said first processing unit and said second processing unit (It is noted in Kawakami et al. the use of a control unit (Fig. 4: 31) for controlling the operation of at least the MPEG2 video signal Processing or the *sound compression Encoder/Decoder (Page 7, ¶ 0139-0143; page 8, ¶ 0150 and ¶ 0156-0157)*).

12. **Regarding claim 8**, **Glew** discloses an electric device comprising:

an integrated circuit (*See fig. 2*); and

wherein said integrated circuit comprises:

a bus (*See bus connected to CPU 31, Memory 35, Graphics circuit 34, Network circuit 33 and Video Processor 23 as shown in fig. 2*) (*Col. 3, lines 18-32*);

a first memory (*Fig. 2: 35*) connected to said bus (*Col. 3, lines 18-32*);

a first processing unit (*CPU 31 as shown in fig. 2*) operable to access said first memory via said bus (*Col. 3, lines 18-32*);

a second processing unit (*Video Processor 23 as shown in fig. 2*) operable to access said first memory via said bus (*Note that the Video Processor is connected to Memory 35 via said bus as shown in fig. 2*), and operable to perform at least one of data processing and calculation in a larger amount than said first processing unit (*Video Processor is operable to process the video data which requires more processing capacity than the data managed by CPU 31. See col. 3, lines 33-65*); and

a second memory (*RAM 24 as shown in fig. 2*) operable to be accessed by said second processing unit without passing through said bus (*Note that the RAM 24 is directly connected to the Video Processor 24 as shown in fig. 2*) (*Col. 3, lines 6-65*),

Glew does not explicitly disclose a converter, wherein said first processing unit expands compressed audio signals, wherein said second processing unit expands compressed video signals to generate video signals, wherein said second processing unit stores reference image data into said second memory, the reference image data being generated when the compressed video signals are expanded, and wherein said

converter is operable to convert the audio signals expanded by said first processing unit into analogue audio signals.

However, **Kawakami et al.** teaches a camera circuit (*See fig. 4*) comprising a first memory (*Fig. 4: 32*); a sound compression Encoder/Decoder (*Fig. 4: 37, the Examiner is interpreting the sound compression Encoder/Decoder as a first processing unit*) operable to access said first memory (*Page 8, ¶ 0150*), said compression Encoder/Decoder, operable to compress and decompress the sound from the video (*Page 8, ¶ 0150, 0158, 0165*); an MPEG2 video signal Processing (*Fig. 4: 33, the Examiner is interpreting the MPEG2 video signal Processing as a second processing unit*) operable to access said first memory (*Page 8, ¶ 0156*), said MPEG2 video signal Processing operable to compress and decompress the video signal (*Page 7, ¶ 0144-0148; page 8, ¶ 0156-0157*), and operable to perform at least one of data processing and calculation in a larger amount than said first processing unit (*It is noted that the video processing in the MPEG2 video signal Processing requires calculation in a larger amount than the sound compression Encoder/Decoder*), wherein the MPEG2 video signal Processing expands compressed video signals, and wherein said second processing unit stores reference image data into said second memory (It is noted that the second memory is a dedicated memory for the compression/expansion processing and the video signal is temporally stored in the second memory (*Page 7, ¶ 0144*), the reference image data being generated when the compressed video signals are expanded (*It is also noted that the MPEG2 compression/decompression uses P-frames (Predictive frames) when performing compression/decompression that would later be*

used for either compressing or expanding the video signals, depending on the application (either reading or writing video data). Therefore, Kawakami et al. further teaches that the second processing unit expands compressed video signals, and wherein said second processing unit stores reference image data into said second memory, the reference image data being generated when the compressed video signals are expanded as claimed); and a second memory (*Fig. 4: 34*) operable to be directly accessed by said second processing (*Page 8, ¶ 0156*). Kawakami et al. further teaches a converter (*D/A converter 65 as shown in fig. 4*) operable to convert the audio signals expanded by said first processing unit into analogue audio signals (*Page 8, ¶ 0158 and ¶ 0165*).

Therefore, taking the combined teaching of Glew in view of Kawakami et al. as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply the concept of using a dedicated processing unit for video compression and decompression having a dedicated memory for processing the video signals and a processing unit of compression and decompression of audio signals and to have a converter to convert the audio signals into analogue audio signals as taught in Kawakami et al. to modify the teaching of Glew to have the first processing unit expanding compressed audio signals, wherein said second processing unit expands compressed video signals, and wherein said second processing unit stores reference image data into said second memory, the reference image data being generated when the compressed video signals are expanded and to include a converter operable to convert the audio signals expanded by said first processing unit into analogue audio

signals. The motivation to do so would have been to further improve the processing units in Glew by allowing recording and play back moving picture data and edit recorded moving picture data.

13. **Regarding claim 9**, the combined teaching of Glew in view of Kawakami et al. teaches a control unit operable to control at least one of said first processing unit and said second processing unit (It is noted in Kawakami et al. the use of a control unit (Fig. 4: 31) for controlling the operation of at least the MPEG2 video signal Processing or the *sound compression Encoder/Decoder (Page 7, ¶ 0139-0143; page 8, ¶ 0150 and ¶ 0156-0157)*).

14. **Regarding claim 10**, the combined teaching of Glew in view of Kawakami et al. teaches a display device (*See Kawakami et al., displays 67 and 204 as shown in fig. 4*) operable to input the video signals generated by said second processing unit to display an image (*See Kawakami et al., page 5, ¶ 0094-100; page 6, ¶ 0122-0127; page 7, ¶ 0136*); and a playback device (*See Kawakami et al., speaker 205 as shown in fig. 4*) operable to reproduce sounds according to the analogue audio signals converted by said converter (*See Kawakami et al., page 5, ¶ 0093; page 6, ¶ 0125; page 8, ¶ 0165*).

15. **Regarding claim 11**, the combined teaching of Glew in view of Kawakami et al. teaches that the second processing unit generates computer graphics image data (*By teaching that the invention is related to computer-based video and that the second*

processing unit process the video signal (Col. 1, lines 5-10; col. 2, lines 43-57), Glew discloses that the second processing unit generates computer graphics image data since the invention is also related to a video conferencing device (Col. 3, lines 33-54)).

16. **Regarding claim 12**, **Glew** discloses an electric device comprising:

a camera (*Fig. 2: 21*),

an integrated circuit (*See fig. 2*); and

wherein said integrated circuit comprises:

a bus (*See bus connected to CPU 31, Memory 35, Graphics circuit 34, Network circuit 33 and Video Processor 23 as shown in fig. 2*) (*Col. 3, lines 18-32*);

a first memory (*Fig. 2: 35*) connected to said bus (*Col. 3, lines 18-32*);

a first processing unit (*CPU 31 as shown in fig. 2*) operable to access said first memory via said bus (*Col. 3, lines 18-32*);

a second processing unit (*Video Processor 23 as shown in fig. 2*) operable to access said first memory via said bus (*Note that the Video Processor is connected to Memory 35 via said bus as shown in fig. 2*), and operable to perform at least one of data processing and calculation in a larger amount than said first processing unit (*Video Processor is operable to process the video data which requires more processing capacity than the data managed by CPU 31. See col. 3, lines 33-65*); and

a second memory (*RAM 24 as shown in fig. 2*) operable to be accessed by said second processing unit without passing through said bus (*Note that the RAM 24 is directly connected to the Video Processor 24 as shown in fig. 2*) (*Col. 3, lines 6-65*),

said second processing unit compress video signals to generate video signals (*See col. 3, lines 33-65*).

Glew does not explicitly disclose a converter, a microphone, wherein said first processing unit compress audio signals, wherein said second processing unit stores reference image data into said second memory, the reference image data being generated when the compressed video signals are expanded, and wherein said converter is operable to input analogue audio signals from said microphone to convert the analogue audio signals into digital audio signals, and operable to output the digital audio signals to said first processing unit.

However, **Kawakami et al.** teaches a camera circuit (*See fig. 4*) comprising a first memory (*Fig. 4: 32*); a sound compression Encoder/Decoder (*Fig. 4: 37, the Examiner is interpreting the sound compression Encoder/Decoder as a first processing unit*) operable to access said first memory (*Page 8, ¶ 0150*), said compression Encoder/Decoder, operable to compress and decompress the sound from the video (*Page 8, ¶ 0150, 0158, 0165*); an MPEG2 video signal Processing (*Fig. 4: 33, the Examiner is interpreting the MPEG2 video signal Processing as a second processing unit*) operable to access said first memory (*Page 8, ¶ 0156*), said MPEG2 video signal Processing operable to compress and decompress the video signal (*Page 7, ¶ 0144-0148; page 8, ¶ 0156-0157*), and operable to perform at least one of data processing and calculation in a larger amount than said first processing unit (*It is noted that the video processing in the MPEG2 video signal Processing requires calculation in a larger amount than the sound compression Encoder/Decoder*), wherein the MPEG2 video

signal Processing expands compressed video signals, and wherein said second processing unit stores reference image data into said second memory (It is noted that the second memory is a dedicated memory for the compression/expansion processing and the video signal is temporally stored in the second memory (*Page 7, ¶ 0144*), the reference image data being generated when the compressed video signals are expanded (*It is also noted that the MPEG2 compression/decompression uses P-frames (Predictive frames) when performing compression/decompression that would later be used for either compressing or expanding the video signals, depending on the application (either reading or writing video data). Therefore, Kawakami et al. further teaches that the second processing unit expands compressed video signals, and wherein said second processing unit stores reference image data into said second memory, the reference image data being generated when the compressed video signals are expanded as claimed*); and a second memory (*Fig. 4: 34*) operable to be directly accessed by said second processing (*Page 8, ¶ 0156*). Kawakami et al. further teaches a converter (*A/D converter 64 as shown in fig. 4*) operable to input analogue audio signals from a microphone (*Fig. 4: 202*) to convert the analogue audio signals into digital audio signals (*Page 5, ¶ 0092; page 7, ¶ 0136 and ¶ 0149*), and operable to output the digital audio signals to said first processing unit (*Page 5, ¶ 0092; page 7, ¶ 0136 and ¶ 0149*).

Therefore, taking the combined teaching of Glew in view of Kawakami et al. as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply the concept of using a dedicated processing unit for video

compression and decompression having a dedicated memory for processing the video signals and a processing unit of compression and decompression of audio signals and to have a converter to convert the audio signals input by a microphone into digital audio signals as taught in Kawakami et al. to modify the teaching of Glew to have the first processing unit compresses audio signals, wherein said second processing unit stores reference image data into said second memory, the reference image data being generated when the compressed video signals are expanded and to include a converter operable to input analogue audio signals from a microphone to convert the analogue audio signals into digital audio signals, and operable to output the digital audio signals to said first processing unit. The motivation to do so would have been to further improve the processing units in Glew by allowing recording and play back moving picture data and edit recorded moving picture data.

17. **Regarding claim 13**, the combined teaching of Glew in view of Kawakami et al. teaches that the second processing unit generates computer graphics image data (*By teaching that the invention is related to computer-based video and that the second processing unit process the video signal (Col. 1, lines 5-10; col. 2, lines 43-57), Glew discloses that the second processing unit generates computer graphics image data since the invention is also related to a video conferencing device (Col. 3, lines 33-54)*).

18. **Regarding claim 14**, the combined teaching of Glew in view of Kawakami et al. teaches a control unit operable to control at least one of said first processing unit and

said second processing unit (It is noted in Kawakami et al. the use of a control unit (Fig. 4: 31) for controlling the operation of at least the MPEG2 video signal Processing or the *sound compression Encoder/Decoder (Page 7, ¶ 0139-0143; page 8, ¶ 0150 and ¶ 0156-0157)*).

19. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Glew, US Patent 6,297,843 B1 in view of Applicants Admitted Prior Art (thereinafter referred as AAPA).

20. **Regarding claim 5**, Glew does not explicitly disclose that said first processing unit performs at least one of de-multiplexing audio signals and video signals from a bit stream and multiplexing audio signals and video signals into a bit stream.

However, **AAPA** teaches an integrated circuit comprising: a bus (*Fig. 2: 2*); a first memory connected to said bus (*Fig. 2: 3*); a first processing unit (Fig. 2: 6) operable to access said first memory via said bus (*See fig. 2*) and operable to perform at least one of de-multiplexing audio signals and video signals from a bit stream and multiplexing audio signals and video signals into a bit stream (*Page 2, ¶ 0012-0015*); a second processing unit (*Fig. 2: 4*) operable to access said first memory via said bus (*See fig. 2*), and operable to perform at least one of data processing and calculation in a larger amount than said first processing unit (*Video processing unit 4 perform image processing which requires more capacity that the audio processed by audio processor 5*); and a second memory (*buffer 7 as shown in fig. 2*) operable to be accessed by said

second processing unit without passing through said bus (*Note that the buffer 7 is operable to be directly accessed by the second processing unit as shown in fig. 2*).

Therefore, taking the combined teaching of Glew in view of AAPA as a whole, it would have been obvious to one of an ordinary skill in the art at the time the invention was made to apply the concept of having a multiplex/de-multiplex circuit for de-multiplexing audio signals and video signals from a bit stream or multiplexing audio signals and video signals into a bit stream. The motivation to do so would have been to provide a multiprocessor configuration in which different processors perform specific operation.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson D. Hernández Hernández whose telephone number is (571)272-7311. The examiner can normally be reached on 9:00 A.M. to 5:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nelson D. Hernández Hernández/
Examiner, Art Unit 2622
September 30, 2009